

**ABSTRACT OF THE DISCLOSURE**

Electric power is generated downhole by changes in annulus pressure. In  
5 a described embodiment, a system for generating electric power includes a  
piston, an accumulator, a reservoir of hydraulic fluid, a turbine, and a generator.  
A change in annulus pressure causes displacement of the piston due to a pressure  
differential between the annulus and the accumulator. Piston displacement  
causes the hydraulic fluid to flow through the turbine, thereby driving the  
10 generator to generate electricity.